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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/764,115	01/23/2004	Seung-Hyun Moon	5000-1-431	7877
33942	7590	02/24/2005	EXAMINER	
CHA & REITER, LLC 210 ROUTE 4 EAST STE 103 PARAMUS, NJ 07652			HYEON, HAE M	
			ART UNIT	PAPER NUMBER
			2839	

DATE MAILED: 02/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

Office Action Summary

Application No.

10/764,115

Applicant(s)

MOON, SEUNG-HYUN

Examiner

Hae M. Hyeon

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 January 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 3, 14 and 20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claims 3, 14 and 29 recite that the tube is formed with a curved cross-section. It is not clear what this means because the tube simply has a circular shape and the present specification does not describe the tube having a curved cross-section.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 6, and 18 rejected under 35 U.S.C. 102(b) as being anticipated by Ferer (4,317,000).

Ferer discloses an optical fiber comprising a plurality of optical fibers 13, a tube 14 binding the optical fibers 13, a plurality of string fillers 26 surrounding an outer periphery of the

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tube 14 helically at a predetermined spacing, a plurality of tensile member 24 positioned between the string fillers 26 to helically surround the outer periphery of the tube 14, and an outer sheath 30 formed in a flexuous shape to surround the outer surface of the string fillers 26 and the tensile members 24. The tube 14, string fillers 26 and tensile members 24 are formed generally circular in cross-section.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 2-4, 7-9, 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ferer in view of Bruggendieck (4,534,618).

Claim 2 recites that the outer sheath is formed with an outer surface that in cross-section is flexuous in correspondence with the outer surface of the string fillers and tensile members.

Although the outer sheath 30 of Ferer has flexuous outer surface, it does not correspondence with the outer surface of the string fillers and tensile members.

Bruggendieck discloses an optical fiber cable comprising a tube 15, a tensile members 16 surrounding an outer periphery of the tube 15 and an outer sheath 17 formed with an outer surface that in cross-section is flexuous in correspondence with the outer surface of the tensile members 16 (see Fig. 2).

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the optical fiber cable taught by Ferer such that it would have an outer sheath formed with an outer surface that in cross-section is flexuous in correspondence with the outer surface of the tensile members as taught by Bruggendieck because the shape of the outer surface of the outer sheath does not affect or change the function of the optical fiber cable. Bruggendieck discloses an outer sheath having both circular and flexuous cross-sections, but both outer sheaths provide the same sealing property to internal components of the optical fiber cable.

Regarding to claims 7-9, they recite preferred materials for the tensile member, the string fillers and the outer sheath. It has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

7. Claims 5, 11, 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ferer in view of Rahman (5,229,851).

While Ferer discloses the string fillers 26 and the tensile member 24 being helically stranded along the tube outer surface, Ferer does not disclose the string fillers 26 and the tensile members 24 stranded in an S-Z form. Also, Ferer does not disclose the use of optical fiber ribbons.

Rahman discloses an optical fiber cable comprising a plurality of optical fiber ribbons 10 within a tube 8, which is wound in S-Z form around a central structural member 3.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the optical fiber cable taught by Ferer such that it would have

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an optical fiber ribbons and an S-Z form strand as taught by Rahman because the use of the optical fiber ribbons and the S-Z form strand are well known in the art of an optical fiber.

8. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ferer in view of Gleason et al (6,349,161 B1).

Claim 10 recites that an empty space between the tube and the optical fibers is filled with a gel filler.

While Ferer does not disclose a gel filler, Gleason discloses an optical fiber cable comprising a tube 332 having a plurality of optical fibers 335 and an empty space between the tube 332 and the optical fibers 335 is filled with a gel filler, which is water-blockable gel.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to add a gel filler taught by Gleason in the optical fiber cable taught by Ferer in order to block water from entering inside the cable.

9. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ferer and Rahman as applied to claims 5, 11, 16 and 17 above, and further in view of Gleason et al.

Claim 12 recites the same limitation as claim 10. Therefore, the same rejection applied in claim 10. Thus, the examiner will not repeat the same rejection.

10. Claims 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ferer and Rahman as applied to claims 5, 11, 16 and 17 above, and further in view of Bruggendieck.

Claims 13-15 recite the same limitations as claims 2-4, 7-9, 19 and 20. Therefore, the same rejection applied in claims 2-4, 7-9, 19 and 20. Thus, the examiner will not repeat the same rejection.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US Patent No. 4,522,464 by Thompson et al., US Patent No. 5,125,062 by Marlier et al., US Patent No. 6,195,488 B1 by Song, and US Patent No. 6,496,629 B2 by Ma et al.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hae M. Hyeon whose telephone number is 571-272-2093. The examiner can normally be reached on Mon.-Fri. (8:30-5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tulsidas C. Patel can be reached on (571) 272-2098. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hae M Hyeon
Primary Examiner
Art Unit 2839

hnh

hnh

Hae Moon Hyeon